

## **STATE LANDS COMMISSION**

### **Title 2, Division 3, Chapter 1, Article 4.7 Performance Standards for the Discharge of Ballast Water For Vessels Operating in California Waters**

#### **Section 2291. Purpose, Applicability, and Date of Implementation.**

- (a) The purpose of the regulations in Title 2, Division 3, Chapter 1, Article 4.7 of the California Code of Regulations is to move the state expeditiously toward elimination of the discharge of nonindigenous species into the waters of the state or into waters that may impact the waters of the state, based on the best available technology economically achievable.
- (b) The provisions of Article 4.7 apply to all vessels that discharge ballast water in California waters except those that are exempt under Section 71202, Public Resources Code.

Authority Cited: Sections 71201.7, 71202 and 71205.3, Public Resources Code.

Reference: Sections 71201.7, 71202 and 71205.3, Public Resources Code.

#### **Section 2292. Definitions.**

Unless the context otherwise requires, the following definitions shall govern the construction of this Article:

- (a) "Ballast Water Capacity" means the total volumetric capacity of any tanks, spaces, or compartments on a vessel used for carrying, loading or discharging ballast water, including any multi-use tank, space or compartment designed to allow carriage of ballast water.
- (b) "Ballast Water Sample" means a unit of ballast water that may be collected and assessed for compliance verification purposes.
- (c) "Board" means the State Water Resources Control Board
- (d) "Colony Forming Unit" means a measure of viable bacterial numbers.
- (e) "Commission" means the California State Lands Commission.
- (f) "Constructed" means a stage of vessel construction where:
  - (1) the keel is laid; or
  - (2) construction identifiable with a specific vessel begins; or
  - (3) assembly of the vessel has commenced comprising at least 50 tonnes or 1 percent of the estimated mass of all structural material, whichever is less; or
  - (4) the vessel undergoes a major conversion.

- (g) "Isokinetic Sampling Facility" means a sampling apparatus in which the velocity (or speed) of the sample stream does not change from the pipe being sampled to the sample pipe itself.
- (h) "Isokinetic Diameter" assumes a circular main flow pipe and circular sampling pipe of which the diameter is designed to maintain the fluid velocity from the main flow to the sample flow.
- (i) "Major Conversion" means a conversion of a vessel;
  - (1) which changes its ballast water carrying capacity by 15 percent or greater; or
  - (2) which changes the vessel type; or
  - (3) which, in the opinion of the Commission, is projected to prolong its life by ten years or more; or
  - (4) which results in modifications to its ballast water system other than component replacement-in-kind. Conversion of a vessel to meet the provisions of this Article shall not be deemed to constitute a major conversion for the purposes of this Section.
- (j) "Sampling Facilities" means the equipment installed to take the ballast water sample.
- (k) "Sampling Point" means that place in the ballast water piping where the sample is taken.
- (l) "Vessel" means a vessel of 300 gross registered tons or more.

Authority Cited: Sections 71201.7 and 71205.3, Public Resources Code.

Reference: Sections 71200, 71201.7 and 71205.3, Public Resources Code.

### **Section 2293. Interim Performance Standards for Ballast Water Discharges.**

Subject to the Implementation Schedule in Section 2294, before discharging ballast water in waters subject to the jurisdiction of California, the master, owner, operator, or person in charge of a vessel to which this section applies shall conduct ballast water treatment so that ballast water discharged will contain:

- (a) No detectable living organisms that are greater than 50 micrometers in minimum dimension;
- (b) Less than 0.01 living organisms per milliliter that are less than 50 micrometers in minimum dimension and more than 10 micrometers in minimum dimension;
- (c) For living organisms that are less than 10 micrometers in minimum dimension:
  - (1) less than 1,000 bacteria per 100 milliliter;

(2) less than 10,000 viruses per 100 milliliter;

(3) concentrations of microbes that are less than:

- (A) 126 colony forming units per 100 milliliters of *Escherichia coli*;
- (B) 33 colony forming units per 100 milliliters of Intestinal enterococci; and
- (C) 1 colony forming unit per 100 milliliters or 1 colony forming unit per gram of wet weight of zoological samples of Toxicogenic *Vibrio cholerae* (serotypes O1 and O139)

Authority Cited: Sections 71201.7 and 71205.3, Public Resources Code.

Reference: Sections 71201.7 and 71205.3, Public Resources Code.

**Section 2294. Implementation Schedule for Interim Performance Standards for Ballast Water Discharges.**

Sections 2293 and 2297 apply to vessels in accordance with the following schedule:

- (a) Beginning January 1, 2010, for vessels constructed on or after that date with a ballast water capacity of less than or equal to 5,000 metric tons.
- (b) Beginning January 1, 2012, for vessels constructed on or after that date with a ballast water capacity greater than 5,000 metric tons.
- (c) Beginning January 1, 2014, for vessels constructed before January 1, 2010, with a ballast water capacity of 1,500 metric tons or more but not more than 5,000 metric tons.
- (d) Beginning January 1, 2016, for vessels constructed before January 1, 2010, with a ballast water capacity of less than 1,500 metric tons, and for vessels constructed before January 1, 2012, with a ballast water capacity greater than 5,000 metric tons.

Authority Cited: Sections 71201.7 and 71205.3, Public Resources Code.

Reference: Sections 71201.7 and 71205.3, Public Resources Code.

**Section 2295. Implementation Schedule for Final Performance Standards for Ballast Water Discharges.**

Beginning January 1, 2020, before discharging ballast water in waters subject to the jurisdiction of California the master, owner, operator, or person in charge of a vessel to

which this section applies shall conduct ballast water treatment so that ballast water discharged will contain zero detectable living organisms for all organism size classes.

Authority Cited: Sections 71201.7 and 71205.3, Public Resources Code.

Reference: Sections 71201.7 and 71205.3, Public Resources Code.

#### **Section 2296. Delay of Application for Vessels Participating in Promising Technology Evaluations.**

If an owner or operator of a vessel applies to install an experimental ballast water treatment system, and the Commission approves that application on or before January 1, 2008, the Commission shall deem the system to be in compliance with any future treatment standard adopted, for a period not to exceed five years from the date that the interim performance standards would apply to that vessel.

(a) The Commission may rescind its approval of the system at any time if the Commission, in consultation with the Board and the United States Coast Guard, and after an opportunity for administrative appeal with the executive officer of the Commission, determines that the system has not been operated in accordance with conditions in the agreed upon application package, or that there exists a serious deficiency in performance, human safety, or environmental soundness relative to anticipated performance, or that the applicant has failed to provide the Commission with required test results and evaluations.

Authority Cited: Sections 71201.7, 71204.7 and 71205.3, Public Resources Code.

Reference: Sections 71201.7, 71204.7 and 71205.3, Public Resources Code.

#### **Section 2297. Collection of Ballast Water Samples.**

Subject to the implementation schedule in Section 2294 and taking into account the following considerations, a vessel to which this section applies shall install sampling facilities to enable collection of ballast water samples in order to assess compliance with Section 2293.

a) Technical specifications for design of in-line sampling facilities:

- 1) The sampling facility shall not damage and/or induce substantial incidental mortality to organisms to be collected in ballast water.
- 2) The isokinetic sample port diameter shall be determined according to the equation:

$$D_{iso} = D_m \sqrt{\frac{Q_{iso}}{Q_m}}$$

where  $D_{iso}$  and  $D_m$  are the diameters of the sample port opening and the main flow in the discharge line, respectively; and  $Q_{iso}$  and  $Q_m$  represent the respective volumetric flow rates through the two pipes.

Sample port size shall be based on the combination of maximum sample flow rate and minimum ballast flow rate that yields the largest isokinetic diameter.

- 3) The opening of the sampling pipe shall be chamfered to provide a smooth and gradual transition between the inside and outside pipe diameters.
  - 4) The length of the straight sample pipe facing into the flow can vary, but shall not be less than one diameter of the sampling pipe. The sampling port shall be oriented such that the opening is facing upstream and its lead length is parallel to the direction of flow and concentric to the discharge pipe, which may require sampling pipes to be "L" shaped with an upstream facing leg if installed along a straight section of discharge pipe.
  - 5) The design of the sample facility shall allow for the servicing and/or cleaning of the sampling facility without impacting the safety of the vessel. The sampling pipe should be retrievable either manually or mechanically, or it should be in a system which can be isolated.
  - 6) The sample facility and all associated parts of the sampler that come into contact or near proximity with the ballast piping shall be constructed of galvanically compatible materials and generally corrosion resistant.
  - 7) When control of the sample flow rate is required, appropriate valves shall be used that do not result in organism mortality due to sharp velocity transitions. Ball, gate or butterfly valves shall not be used.
  - 8) If a pump must be used to sample the discharge side of a tank, an appropriate sampling pump shall be used to minimize organism mortality.
  - 9) The Master of the vessel must maintain positive control (e.g. tamper evident lock-out seals) over the ballast water sampling facility when compliance verification or scientific sampling is not being conducted.
- b) Technical specifications for installation of a sample point in the ballast water discharge line:
- 1) The sampling point shall be safely accessible to Commission staff, and shall not be in a confined space.

- 2) The sampling point shall be installed in a straight part of the discharge line, downstream of the last treatment process, as near to the ballast water overboard discharge as practicable.
- 3) The sample shall be removed from the main pipeline at a location where the flowing stream at the sample point is representative of the contents of the stream. The sample facility should be placed at a point where the flow in the main pipe is fully mixed and fully developed.
- 4) As many sample points shall be provided as necessary to draw a ballast water sample during typical deballasting of the vessel.
- 5) In cases where the ballast system design does not enable sampling from the discharge line, other arrangements for a sampling point may be made on a vessel-specific basis with prior approval of Commission staff.

c) Existing sampling facilities

Vessels may use existing sampling facilities, installed prior to January 1, 2010, to fulfill the requirements of this Section with prior approval of Commission staff.

Authority Cited: Sections 71201.7, 71205.3 and 71206, Public Resources Code.

Reference: Sections 71201.7, 71205.3 and 71206, Public Resources Code.